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# The Canadian Practitioner and Review.

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## Original Communications.

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### PRESIDENT'S ADDRESS—CANADIAN MEDICAL ASSOCIATION, 1904.\*

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BY SIMON J. TUNSTALL, B.A., M.D., VANCOUVER, B.C.

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*Mr. Chairman and Gentlemen,*—I feel that my first duty to-night is to offer you my very hearty thanks for the honor you have conferred upon me in electing me President of the Association.

When I recall the names of those who have preceded me in this chair, I can only ask your indulgence for the deficiencies you may find in me, of which I am very conscious, and express the hope that under my presidency the interests of the Association may in no wise suffer nor its honor be in any way tarnished.

The present occasion is no ordinary one. In the appointment of a President from among the members of the Association whose home and work lie in this far distant portion of the Dominion, and in our meeting here to-day at the Doorway of the West, a new departure has been made.

I am far too modest to suppose for an instant that any particular merit of mine has induced the Association to make this departure; rather I conceive it to be due to a general recognition of the claims and standing of the western members as a whole, and of the growing importance of this fair Western Province.

I should be performing my duties but poorly did I not seize this opportunity to thank you on behalf of my western conferees, and on behalf of the people of this Province in general,

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\*Delivered at Meeting of Canadian Medical Association, Vancouver B.C., August 1904.

and of this city in particular, for the compliment you have paid us in selecting this Province and this city as the place of meeting for this year, and I feel I am only expressing their wishes in tendering you a hearty western welcome to our midst, and their hopes that your brief stay among us will be both pleasant and profitable to you all.

To many of you, probably to most of you, the rapid progress and general development of this young Province will come as a surprise. It does to most of our visitors from the older parts of the Dominion who know how recent has been the settlement of the West. And certainly, looking round, it does seem scarcely realizable that the site of this rapidly expanding city, of which its citizens are so justly proud, and the very spot on which this building stands, surrounded by so many comforts and refinements of modern life, was, less than two decades ago, a wild and almost impenetrable virgin forest, the haunts of the bear, the deer and the primitive savage.

It is less than a score of years by two that the incorporation of this city took place, and yet to-day it will compare favorably with many cities of the older Provinces twice and thrice its age. From the medical standpoint it is reaching after a high ideal.

The incomparable water supply which is brought in closed steel conduits from the bosom of the mountains to the north of us; the sewerage system, with its septic tanks: the paved streets, with their array of cleaners; the cement sidewalks which are now throughout the city, rapidly replacing the earlier and cruder planking; the public and private hospitals: the General Hospital, which is now being built, and which, when finished, will be the peer of any hospital of its size, all make it clear that we are endeavoring to keep abreast of the times, as well in sanitary as in other matters.

It is no idle boast, then, if I say that in the West events move rapidly. Time is no sluggard here, and we see history fashioning itself before our eyes. The whole of this great Province was in undisputed possession of savage aborigines a half century ago. The closing years of the first half of the nineteenth century saw the first real settlement made on Vancouver Island, at a place called Camosum in the native tongue, now Victoria, the capital of the Province.

A few years later, in 1858, an Act was passed in the Home Parliament to provide for the government of this new colony, thereafter to be known as British Columbia. From this date the real settlement of the Province begins. The discovery of gold in the Fraser and Cariboo soon made these districts as famous and as widely known as Sacramento or Ballarat, and a great inrush of population was the result. But a very few

years later the conception of that colossal and momentous undertaking, the building of the Canadian Pacific Railway, began to shape itself in men's minds, and was finally carried out. You are all, doubtless, familiar with this great undertaking, and know the almost insuperable difficulties its earlier promoters had to contend with, and how in the end, in spite of political, natural and every other obstacle and hindrance, they successfully carried through the scheme, and made possible the union of British Columbia and the great North-West with the rest of Canada, and gave us as a result that splendid heritage, that united land which stretches from ocean to ocean, from the rising of the sun to the going down thereof—a land of which all her sons and daughters are so proud—our beloved Canada.

It is gratifying to the profession to know that it has been ably and honorably represented among those history-makers in the persons of Drs. Helmcken and Tolmie, who were the first medical men to settle in the colony, about the middle of the last century. Both took prominent parts in the earlier events of the Province. The former still remains with us: the latter has gone to his rest. Prior to their advent the native Medicine-man had it all his own way.

There is a significance, not without interest to my mind, in the fact that this Association, representing as it does to-day in its various members the highest medical knowledge of this enlightened part of the world's history, should meet here in this new country, where Shamanism, or the cult of the savage Medicine-man, so recently prevailed, and does to some extent still prevail. The old and the new order of things are thus brought into suggestive contrast and juxtaposition, and we are led naturally to reflect upon the stages and steps we have passed since the days when all medical knowledge was comprised in the superstitious and rude practices of our savage prototypes: and in spite of our sometime failures and our lack of knowledge, still, in certain directions, the reflection on the whole is a pleasant and gratifying one, both to ourselves and humanity at large. It certainly would not be the least interesting of subjects were I to attempt on this occasion a general survey of the march and progress of medical science from the days and practices of the primitive Medicine-man as we find him even in this Province, down to the times and discoveries of Lister, Pasteur, Virchow and their followers.

But it is not my intention to undertake such a task to-night, interesting and appropriate as it might under the circumstances be, although I cannot leave the subject without calling your attention briefly to a fact of which all of you may not be aware, and which gives pertinence to my reference to the old-time Shaman or Medicine-man. We are all familiar with

hypnotism, but there are few of us, perhaps, aware that in the employment of hypnotism as a therapeutic agent we are returning to primitive methods, to the practice of our savage prototypes. Those who have made special study of the practices and custom of savage races inform us that the primitive doctor or Medicine-man, was not that self-conscious fraud and humbug, knowingly duping his credulous patients, he is thought to have been, but a person who had a belief in his own powers and cures; and that those powers and cures were, when genuine, generally, if not always, attributable to hypnotism, especially to that phase of it known as suggestion. A state of hypnosis was induced in his patient by the monotonous droning of his medicine song and the noise of his rattle, and when in this condition his attempt to extract the spirit of the disease from the patient's body, and his statement that he had presently accomplished it, acted suggestively upon the imagination of the patient and effected the cure. "Extremes meet," and "there is nothing new under the sun," we are told, and the school of Nancy, which is founded upon the suggestive phase of hypnotism, is not a new practice, but an unconscious return, or rather I should say it is an unconscious modification and extension of these primitive methods which were in vogue among our savages here up to a few years ago, and may be to this day, for aught I know to the contrary.

But enough on this head. It is my intention rather to bespeak your consideration to-night of a point or two which I, in common with many of the members of the profession, have very much at heart, and which I deem of such importance as to merit our most careful consideration and endorsement.

I have reference in particular, to: 1. The Canadian Medical Protective Association. 2. The Federal Health Bill. 3. The Dominion Medical Council. 4. The Treatment of Inebriates.

With regard to the first, The Canadian Medical Protective Association, I would desire to urge upon members the strong claims this Association has upon the profession. I am among those who believe in the need of such an Association, and that it may be made a valuable means of assisting and protecting members of our profession from wrongful actions-at-law, to which we are all of us at all times liable: actions brought by irresponsible persons for alleged malpractice, or by unscrupulous persons for the purpose of obtaining money under threats of injury to our professional character.

It is well known that a medical man's professional prospects depend to a very large extent, if not entirely, upon his professional reputation, and it is not difficult, therefore, for unprincipled persons to attempt to levy blackmail upon him by threatening to bring action against him for malpractice or

professional incapacity, which action, though wholly groundless and undeserved, may have the most disastrous effects upon his career and pocket.

During the past two years the Association has fought out several such cases successfully, and has amply demonstrated its usefulness and justified its existence. It is, therefore, a matter of wonderment to many of us that the Association has thus far received so little encouragement or support from the profession as a whole. Out of a possible 5,500, the total membership last year was only 252. This is altogether too small a number to make the aims and work of the Association effective or sustain it in a solvent condition, and I welcome this opportunity to invite your earnest co-operation in enlarging its membership and strengthening the hands of the Executive, and would to this end suggest that a special committee be struck during the Convention for the purpose of considering how best to enlist the sympathies and support of our brethren who are not yet members. I cannot but think that a large increase in the membership must inevitably result if the aims of the Association be once rightly understood.

The objects of the Association are such as all can subscribe to. It is not intended to defend or assist in defending unworthy members, or those who are actually guilty of malpractice, or who have brought discredit upon the profession. It aims rather to assist the worthy, those of its members who are wrongfully charged and whose character and reputation are placed at stake; and also to deter irresponsible and unscrupulous persons from bringing action against members of the profession for the purpose of spiting or injuring them, or of exacting a bribe for their silence; and it is only by uniting ourselves together in such a way as this Association offers that we can hope to secure the support of our brethren and become immune to many attacks which would otherwise be made upon us.

I feel, therefore, that we have but to devise some plan of arousing the interest of our brethren in the matter to ensure their support and co-operation.

And now a word or two as to the Federal Health Bill. Thanks to the energetic efforts of the special committee appointed to attend to this matter considerable progress has been made towards the attainment of our desires in this behalf. The interest and sympathy of the Ministers of the Crown have been secured, and the Minister of Agriculture, the Hon. Mr. Fisher, under whose department the matter more directly falls, has taken the matter up most courteously and is thoroughly alive to its urgency and need. For the information of those not familiar with this subject, I would briefly say that the Association, at its meeting in Montreal in 1902, placed itself on record by reso-

lution to the effect that it is expedient that a Department of Public Health be created by the Dominion Government and administered under the authority of one of the existing Ministers of the Crown, thus bringing all general questions relating to sanitary science and public health under one central authority, to be known as the Public Health Department. There is no need for me to dwell upon the importance or desirability of this step; it must commend itself to every member of the profession.

Thus far the Government has not seen its way to grant the desired measure. The work is not yet accomplished, and the need of pushing the matter still exists. I sincerely hope the meeting will not dissolve without first passing a strong resolution in favor of the measure, and thus encourage and strengthen the hands of the committee who have this work in hand.

And now I desire to touch upon my third point, which I regard as of the highest importance. I refer here to the Dominion of Canada Medical Act, which was assented to in the Federal House in 1902. We are under a deep debt of gratitude to the members of the special committee, and especially to Dr. T. G. Roddick, for his untiring efforts to get this measure placed upon the statutes of the country and it is with great regret that I notice so much misapprehension as to the scope and powers of this Bill still exists in certain quarters. It has been thought that it would encroach upon the rights and privileges of the different Provincial Medical Boards and interfere with their autonomy, and I gladly hail this opportunity to say a few words which may help to remove this misapprehension. It was, and is, not in any way intended to interfere with existing provincial rights or intrench upon the prerogatives of Provincial Medical Boards. As an instance, in my own native Province, Quebec, our French-speaking brethren will have the right of examination in their own language.

Provincial registration and Provincial Boards will still continue to exist, and each Province will be at liberty to fix whatever standard it pleases for its own practitioners. They can, where they wish, continue as examining boards with power to grant provincial licenses, as they do now, and in any case in their hands will be left all matters relating to taxation and professional discipline.

The Bill is a purely permissive one, and though it has been placed upon the statutes of the country, it will be necessary, before it can become operative, to have the consent and co-operation of all the Provincial Medical Boards. Each Provincial Board will have to seek a slight amendment to its present Medical Act. This is all that is now required to make this most desirable measure effective, and I sincerely trust that this

consent and co-operation will not be long wanting, for the aims and scope of this Act are such as should commend themselves to every member of the profession. Briefly, I would say that the main purpose of this Bill is to establish a Central Medical Council of Canada, with power to examine candidates and grant licenses, the possession of which shall ensure to the holders thereof such a medical status as will enable them to practise not only in all parts of the Dominion, but in the United Kingdom as well, or, indeed, in any portion of his Majesty's Empire, in short, to do away with those mortifying disabilities under which a medicinal man trained in Canada now labors, and put him upon a footing of professional equality with his brethren in other parts of the Empire. This is assuredly a laudable and most desirable object, and one which, in my humble opinion, should call forth the best efforts of each one of us to bring about its accomplishment: and I sincerely trust that some concerted action will be taken in this matter before the meeting closes.

It is the least, I think, we can do to show our appreciation of the strenuous efforts exerted in securing the passage of so important a measure.

This brings me to my fourth and last point, "The Treatment of Inebriates." A conviction has been steadily growing in the minds of most medical men of late years that something should be done for the care and control of dipsomaniacs and inebriates in the form of founding establishments combining the main features of a hospital and an insane asylum, where drunkards could be legally confined under medical authority and treated in a systematic and enlightened manner. The practice, hitherto, of treating them as criminals subject to a fine or short periods of confinement in the common prisons of the country, has been shown to be wholly unsatisfactory and often productive of the greatest evil to themselves and those who may be dependent upon them.

There can be no doubt, I think, that the care and treatment of those unfortunate members of society is a question of the gravest and most vital importance, and should command the interest and attention of medical men as a subject, which, coming well within their province, affects so seriously the general commonwealth.

A movement towards this end has already been taken in Ontario, and a Bill drafted, the principles of which have received the endorsement of the Toronto Medical Society, and also of our own Association; but what we want is a Dominion Act affecting the whole country; and it would be the source of the greatest satisfaction to me if this meeting would take this question up seriously and nominate a committee to draft a



measure that could be submitted to the Federal authorities. This could be done either on the lines of the Ontario Bill or any others that might commend themselves.

Speaking, personally, I may say that I shall be only too glad to help in drafting such a measure and giving any other assistance in my power, for I am convinced that the adoption and carrying out of the provisions of a bill of this kind will do much to diminish the volume of sickness, pauperism, vice and crime that now stains the annals of our country and restore to lives of usefulness and self-respect many of those poor unfortunates whom it is the design of such a measure to control and help.

Before closing my address, I wish to express to our visiting brethren my appreciation of the kindly feeling and interest which have actuated them in taking part in the deliberations of our National Association, and to hope that their stay may be fruitful of pleasant reminiscences.

And now, gentlemen, I must thank you for your kind reception of me as your President this year, and for the patient and courteous hearing you have given to my remarks, and trust that the suggestions I have ventured to offer may meet with your approval and receive your support.

## ADDRESS IN MEDICINE—CANADIAN MEDICAL ASSOCIATION.\*

By R. E. MCKECHNIE, M.D.

*Mr. Chairman and Gentlemen.*—In asking a member of the profession residing in the far West to deliver the address in medicine, I feel that a compliment has been paid, not so much to myself, as to the West. To demand that we, living so far away from the centres of learning, from the great teaching institutions of the East, should nevertheless be expected to keep ourselves abreast of the times and in touch with the latest discoveries, is surely expecting a great deal; and then to expect that one, living under such barren influences, should be able to give you an address equal to this occasion, containing some food for thought and pointing out the pathway of duty and practice, is to look still further for a miraculous manifestation. But the genius of the West is ever equal to all occasions. It has grown accustomed to the knowledge that the best wheat in the world grows in our North-West; that our forests can supply the hugest sticks of timber known to commerce; that our fisheries can supply the world with illimitable quantities of salmon, halibut and other delicacies; always the best, the hugest and the illimitable, ever the superlative. So it is not strange that a strong egotism has developed out here, sufficient even to accept this task, and hoping, but with misgivings, that its self-sufficiency may not suffer in the attempt. Personally, I feel that a great honor has been conferred on me, and I most sincerely thank the Association for its kindness, and trust that its confidence may not have been misplaced.

As to-day we seek to adapt treatment according to the cause of disease, so, looking back to the remotest ages, we find the human instinct groping along the same pathway. But in the early ages of the race science was unknown, and miracle was seen in every unexplainable phenomenon. Hence, disease was attributable to the wrath of a good being or the malice of an evil one, and treated accordingly. Among the ruder tribes the Medicine-man has ever held sway; but even in higher civilization we find that in Egypt the priests of Osiris and Isis claimed powers over disease; in Assyria, the priests of Gibil; in Greece, the priests of Aesculapius; in Judea, the priests of Jehovah. While these have ceased to exist with the decay of their respective religious systems, the ruder primitive tribes have persisted. They are found among the aboriginal tribes of Africa to-day, as also on this side of the Atlantic. Parkman,

\*Read at Meeting of Canadian Medical Association, Vancouver, B.C., August, 1904.

in discussing the customs of the Hurons, says: "A great knowledge of simples for the cure of disease is popularly ascribed to the Indian. Here, however, as elsewhere, his knowledge is in fact scanty. He rarely reasons from cause to effect, or from effect to cause. Disease, in his belief, is the result of sorcery, the agency of spirits or supernatural influences, undefined and indefinable. The Indian doctor was a conjurer, and his remedies were to the last degree preposterous, ridiculous or revolting."

Among the Coast Indians in British Columbia the practice is still kept up, and it may interest you to hear me relate what I saw not forty miles from here only three years ago. In the Indian villages are to be found huge barnlike structures called rancheries, each consisting of one immense room and capable of accommodating twenty or thirty families. Living close to nature, the floor, of course, is mother earth. Rough stalls, arranged along the walls, separated by screens of rush matting and open towards the centre, form the none too private retreats of the individual families. Each lights its own fire on the earthen floor opposite, whereon their rude cooking is done. The smoke escapes through the shingles, as there is no chimney, and in the absence of windows the light comes in through the cracks in the wooden walls. I went down one evening to such a place to see a sick Indian woman. It was dusk, and the waves of the sea were lapping the beach close at hand, while dusky children flitted by in the twilight, engrossed in some pastime. On entering the only door in the rancherie, I found it in utter darkness, excepting for a small fire burning at the extreme end of the building. Here was presented a study in light and shade to have suited a Rembrandt. Around the fire was arranged a circle of Indian women (it is always the women who are closest to the mysteries of nature), while at one side was the patient, too weak to sit up, but supported by a couple of sympathizers. Facing her was the Indian Medicine-man, trying to cure her disorder by directing his energies to overcome the supposed cause of her disease. My diagnosis was tubercular pleurisy with effusion, but my Indian confrere had diagnosed possession by an evil spirit, and as he was in charge of the case, I could only look on. Each woman, with a stick in either hand, was beating on a piece of wood before her, making as much noise as possible, and adding blood-curdling explosives to the incantations of the Medicine-man, in a vain endeavor to drive out, to scare out, the possessing spirit. But unfortunately this kind comes not forth by such rude wooing. And so, from the gray dawn of time, down to what we imagine is the mid-day splendor of to-day, such forms of practice have persisted through all the ages.

But let us not imagine the air clear yet ; the fog is only getting thinner. In other times the sun has attempted to shine through. Five hundred years before Christ, Hippocrates broke away from the old traditions of healing, the supernatural methods, and laid the foundations of medical science on experience, observation and reasoning. Later his teaching influenced the school of Alexandria, where positive knowledge was developed by the adoption of anatomic studies ; and centuries later, under Moslem patronage, the medical sciences reached their highest development in the Middle Ages. But Europe was less fortunate under Christian influences. There was a return to the belief in the supernatural origin of disease, and in the practice of supernatural methods to combat it. Retrogression prevailed over progression. Still believing in demoniacal possession, the various phases of exorcism were practised, even combined with such practical methods as the following : " To disgust the demon with the body he was tormenting, the patient was made to swallow or apply to himself unspeakable ordures, with such medicines as the livers of toads, the blood of frogs and rats, fibres of the hangman's rope, and ointment made from the body of gibbeted criminals." For myself I would prefer the simpler methods of the British Columbia Medicine-man. Cures effected by relics, by pilgrimages and sacred observances obscured the horizon, while even the Divine Right of Kings gave the world the blessings of the Royal touch of King's Evil. All these practices were injurious to the development of medical science, for " why should men seek to build up scientific medicine and surgery when relics, pilgrimages and sacred observances, according to an overwhelming mass of concurrent testimony, had cured hosts of sick folk in all parts of Europe?" But finally the tide turns. The discoveries of Galileo, Kepler and Newton had their reflex on the sister science of medicine, and investigators made bold to pry into the secrets of life and learn her vital processes, to seek the true causes of disease and endeavor to find the cure. Relapses have occurred. As fanatics opposed the introduction of the fanning-mill because in infringing upon the divine prerogative, which furnished the wind to winnow the wheat from the chaff, similarly, opposition arose to the introduction of inoculation, vaccination and the use of anesthetics. And as supernatural agencies were invoked to cure diseases supposed to be of supernatural origin, so to-day we have the various sects of faith-healers, magnetic healers and what not.

But, as Carlyle says, " Only what is true will persist. Out of the merciless fire of modern criticism truth, like asbestos, will come forth purified ; but vain theories, gaseous, will be dissipated among the waste winds forever."

But where do we stand to-day? Have the fogs all lifted and do we now see clearly? Unfortunately not. Investigators to-day are not numbered by tens but by hundreds, pursuing many diverse threads of thought, and giving to the world their conclusions, fully formed or immature, probable for fantastic, relevant or irrelevant.

The search for the causes of disease still continues as actively as ever, but disappointments are far more numerous than successes. Concerning sarcomata, Stimson, in this month's *Annals of Surgery*, says: "We are absolutely in the dark as to etiology, and no further advanced in prognosis and treatment than were our colleagues a quarter of a century ago."

Dr. Snow, Chief of the London Cancer Research Committee, has come to almost identical conclusions regarding carcinoma. As regards these two classes of diseases, we are, therefore, forced to be content, at present, with increased ability to diagnose them, and have to thank the surgeon largely for the groundwork of this advance.

In 1882 Koch proved tuberculosis to be due to a specific bacillus, and in 1890 startled the world with the announcement of a cure. We all remember the reaction, the tremendous disappointment, felt not only by the laity, but even more keenly by ourselves, when slowly, unwillingly, we were forced to admit that our expectations were not realized. Early in 1903, Behring delivered a lecture before the Vienna Medical Society, detailing his experiments on animals with his own special serum, and speaking very hopefully as to the future. Perhaps he, who with Roux, discovered in diphtheritic antitoxin the greatest remedial agent of recent times, will unravel the puzzle.

More recently, Marmorek, of Paris, has staked his great reputation by giving to the world the results of his labors in a new serum, and we can only trust that time will prove that it possesses some definite value. Later still, that our professionally agnostic brethren may not starve for want of food, an Italian professor has enunciated that Koch's tubercle bacillus is not the cause of phthisis, but rather an uncouth octapoid micro-organism of his own finding. Well may the general practitioner raise his hands in despair and wonder what he can believe.

But experience has shown that in tuberculosis, as in other things, prevention is better and surer than cure. Statistics are piling up year by year, adding proof where now none is needed, that, recognizing tuberculosis as an infectious disease and treating it accordingly, a definite gain can be recorded. Education of the public has already advanced so far that more positive steps should be enforced. Compulsory notification, as in other infectious diseases, proper disposal of infected excreta, disinfection of infected dwellings, etc., should be rigidly carried

out, and the same positive results would be attained throughout the country at large as already obtain in the few places far advanced enough to follow this self-evident line of action. A resolution should be passed by the present meeting, urging the various Provincial Governments to introduce the necessary legislation, and I venture to affirm that, coming from so influential a body of scientists, the suggestion would be adopted. And, if adopted, as I have already said, the educated sentiment of the public would not obstruct, but rather would uphold the action of the authorities. Perhaps this body has already taken such action, but until the various authorities have adopted the suggestions, I consider it the duty of this Association to yearly reiterate the advice. Then finally will begin an era of diminution, until, as some of our more optimistic brethren affirm, fifty years will see the extinction of the Great White Plague.

Councilman's pronouncement as to the causative agent of variola still remains unchallenged; while more recently Mallory, of Boston, has described a protozoan which he has named *cyclaster scarlatinalis*, and which, he believes, has a causal relation to scarlet fever. In the winter of 1902-3, Mosher, of the Kinderspital in Vienna, announced the discovery of an anti-scarlatinal serum prepared from a coccus constantly found in the throats of subjects of that disease. His statistics, covering several hundreds of cases, both mild and severe, were, as such statistics usually are, certainly favorable; but he failed to prove his coccus as the cause of the disease, and the consensus of opinion inclines to believe that such favorable results were due to the combatting of the influences of a mixed infection. The same favorable results can also be obtained by the use of antistreptococic serum, which reagent, in other forms of infection, has not the wide use among the profession that its virtues demand.

To turn to another field, where surgery and medicine meet, we find that some definite progress has been made. Numerous operations on the stomach have shown that ulceration is more common there than formerly suspected. The physician of to-day must not expect to find all the classical symptoms, for we can have ulceration without pain as we also can have it without hemorrhage. Brilliant results have been obtained in most inveterate cases, by operative methods, results such as medicine has not afforded. Under these circumstances, we have the added responsibility of advising some of our patients to submit to the risks of an operation, a responsibility which will often tax our courage to the utmost, but which we, as true men, should not shirk when the occasion arises.

In diseases of the biliary tract, surgery has also disclosed

many new features. The post-operative biliary fistula, in cases of obstruction of the common duct, affords a positive means of correctly estimating the quantity and quality of the bile. The use of cholagogues has an established place in our practice, but now our faith is rudely shaken. Although the term cholagogue has been in use for more than two thousand years, and is, apparently, as firmly seated as the everlasting hills, recent investigations have caused it to tremble, and it may eventually disappear as did many a mountain in some prehistoric cataclysm. Mayo Robson, in estimating the effects of certain so-called cholagogues, found that the old reliable calomel caused a diminution instead of an increase in the flow of bile. Enonymin gave the same result, while rhubarb and podophyllin, turpentine and benzoate of soda gave negative results. His conclusion is: "The supposed cholagogues investigated seem to rather diminish than increase the amount of bile excreted." Perhaps the most of us feel like saying as the fox to the grapes, "We did not think they were much good, anyway."

As regards cholelithiasis we have also learned a great deal, and have had to revise our views as to etiology, and must consider the typhoid bacillus and the bacillus coli the primal cause for the majority of the cases. The French school go so far as to affirm that, without infection at some stage of the disease, we will not have cholelithiasis. Legars says: "The infectious origin of biliary lithiasis is proved, for the following reasons: If we have shown that gall-stones do not depend on general and obscure humoral conditions, but on a local infectious process, the disorder becomes for the most part also a local matter, and as such, accessible to direct local means. If the calculi are once formed, they increase and multiply, and we can still be sure that they are due to a single attack of lithogenous infection. At a given moment, microbial invasion of the gall-bladder took place, and these microbial invasions, of intestinal origin, depend on various causes and may occur in the course of different acute disorders; at any rate, the calculous disorder comes from this primordial lithogenous cholecystitis. Once more, it is a complaint of the gall-bladder and ducts, not of the bile, and lithogenous cholecystitis is comparable to many other localized infections, such as appendicitis, for instance. By removing the calculi, or the gall-bladder, recovery may be complete and final. Finally, we find infection not only at the origin of lithiasis, but also at all stages of the disorder; it is the leading factor of the various complications as well as of the prognosis of the complaint."

Deaver says: "It can be emphatically stated that gall-stones are always the result of precipitated salts and tissue debris, following in the wake of bacterial infection, mild or severe in degree.

Furthermore, the complications of chronic gall-stone disease, adhesions, ulceration, fistulæ, liver and pancreatic disease, are also due to infection." He also says: "The treatment of chronic gall-stone disease, its complications and sequelæ, can only be surgical. Gall-stones are formed through the aid of infection, and therefore the disease is local and requires local treatment, that is, operation, and not solvents or cholagogues to relieve a condition resulting from faulty metabolism."

Therefore, the same application can be made here as was made in reference to gastric ulceration. We should realize the impotence of medicines. Solvents do not dissolve, and the old treatment was merely that of temporizing, with the hope that Dame Nature would aid our misguided efforts by expelling the offending bodies through the natural passages. Such expectancy is often dangerous. Surgery holds out a positive cure in a large proportion of cases, but too many of us fear the responsibility, of advising such radical treatment, and our patients suffer from our timidity.

Let us now return to a consideration of the work being done by our great army of investigators. In reviewing their work, not only that of the past year, but of recent years, we see labor multiplied, mountains heaped on mountains in the attempt to scale the heights of the unknown, until, considering the results attained, we might be forgiven for inquiring, "What avails so Titanic a struggle?" The causes of disease are so intricate that they are reached only after ages of scientific labor. Yet a few successes have made us impatient of the coming of complete victory. Some successes have proved to be stars of the first magnitude, others but the smallest flint sparks to illuminate the truth, whilst many so-called discoveries have given no more light than when wax is struck on wax, idle theories, thoughts written on the brain, and now, let us hope, rubbed out forever. Looking at the workers as constituting an army, one searches in vain for a controlling spirit, one which will concentrate the tremendous and apparently never-tiring energies of this mass of workers into a well-directed assault on some stronghold of the unknown. Modern investigators are, to quote a phrase of Carlyle's, "like a hapless servant gone masterless, unfit for self-guidance." To give an idea of the varied subjects being studied, let me quote the titles of a few of the papers published during the year in but one publication, *The Journal of Medical Researches*: "On the Appearance and Significance of Certain Granules in the Erythrocytes of Man," "The Influence of Certain Bacteria in the Coagulation of the Blood," "The Relation of Specific Gravity and Osmotic Pressure to Hemolysis," "The Bacteriolytic Complement Content of Blood Serum," "The Agglutination of the Pneumococcus with Certain Normal and Immune Sera," "Cat's Blood: Differential Counts



of the Leucocytes," "A Study of the Agglutinating Hemolytic and Endothelialitic Action of Blood Serum in Variola," and so on. I do not wish to speak slightly of the labors which these titles of so diversified investigations portray, but I do affirm, that if the workers of some one strong school were under one sole control, their campaign planned against one enemy, and their work properly correlated, more progress would be made in a given time than by the independent, uncorrelated work of all the schools combined.

Such a view is perhaps too Utopian. The world will "gang its ain gait," and our workers will continue to work as before. Truth will gradually be unfolded and science will be developed in the medical field as in the other realms of science. As Marconi did not have to wade through all the drudgery of elaborating the data he needed but utilized the work of others in perfecting his discovery; as Roentgen needed to win but a single step in advance of others in the race to gain the palm, so, too, can we confidently look forward to the appearance of a master from among our members, one who, building with the bricks made by others, will erect the edifice of truth containing the key which will unlock the secrets of nature and give us command over our most illusive foes. We all feel that that day is near at hand, and when it dawns we will join unselfishly, without a trace of jealousy, in crowning that master with the everlasting laurel.

## THE SURGICAL TREATMENT OF COMPLETE DESCENT OF THE UTERUS.\*

By E. C. DUDLEY, M.D., CHICAGO.

Complete descent of the uterus, descent to the third degree, which may be defined as that deviation in which a part or the whole of the uterus is outside of the vulva, is always associated with extensive injury to the pelvic fascia, the pelvic connective tissue, the muscles of the vaginal outlet, the perineum and the vaginal walls; in fact, these injuries of the pelvic floor constitute the essential lesion, the mal-location of the uterus being an incidental factor.

The uterus in its normal position lies across the pelvis, the fundus pointing in a slightly upward anterior direction, and the external os in a slightly downward posterior direction. The long axis of the uterus in this normal direction makes an acute angle with the long axis of the vagina, which extends from the vulva upwards and backwards in the direction of the hollow of the sacrum. Generally speaking, mobile anteversion with some degree of anteflexion is the normal position of the uterus; at any rate, the uterus in its normal range of movements does not deviate, unless temporarily beyond the limits of a certain normal anteversion and anteflexion.

In the etiology and treatment of descent the practical significance of this acute angle between the axis of the uterus and vagina is very great, because the uterus in the act of prolapse must descend through the vaginal canal in the direction of that canal, that is, a coincidence of the two axes is a pre-requisite of descent. Now, if the essential condition of descent is a coincidence of the axes, it follows that one factor, at least, in the treatment of descent must be to restore the normal angle between the axes.

In labor the anterior wall of the vagina is depressed, stretched and shortened by the advancing child that during and after the second stage the anterior lip of the cervix uteri may be seen behind the urethra. This location of the cervix—so close to the anterior wall of the pelvis—necessarily involves great stretching of the utero-sacral supports which normally hold the cervix uteri, and together with it the upper extremity of the vagina close to the hollow of the sacrum. This function of the post-uterine ligaments having been temporarily impaired, the upper extremity of the vagina is displaced forward, so that the uterus, having sufficient space between itself and the sacrum, instead of maintaining its normal anterior position, may fall backward

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into retroversion and thereby bring its own axis into line with the direction of the vagina. Frequently the change in the direction of the vagina from the normal oblique to the abnormal vertical is still further increased by injury to the vaginal outlet; the perineum may be torn in any direction, and what is more serious, it may be torn away from its pubic attachments and in this way may be displaced backwards towards the tip of the coccyx: in fact, such displacement is so common, as the result of injuries to the perineum, as to suggest the propriety of a change in terminology from laceration to displacement of the perineum. The upper extremity of the vagina being displaced forward and the lower extremity backward, and the direction of the overstretched, dilated vagina now being vertical, the heavy uterus, having its long axis in the same vertical direction, has all the conditions favorable to progressive descent.

If the puerperium progress favorably with prompt involution of the pelvic organs, and if the relaxed vesico-vaginal wall and other parts of the pelvic floor, especially the utero-sacral supports and the broad and round ligaments, recover their normal tone, then the whole pelvic floor, including the uterus, resumes its normal relations. But if the enlarged heavy uterus remains in the long axis of the vagina, and especially if the fundus uteri be incarcerated under the promontory of the sacrum, with the sacral supports stretched so much and for so long a time that they cannot recover their contractile power; and if normal involution of the pelvic organs be arrested, then descent may not only persist, but may progress with constantly increasing cystocele and rectocele until the entire uterus has extruded through the vulva.

It is most important to remember that complete prolapse of the uterus is only an incident to prolapse of the pelvic floor. The whole mechanism is that of hernia, and the condition is hernia, for the extruded hernial mass drags after it a peritoneal sac which, hernia-like, contains small intestines. This sac forces its way to the pelvic outlet and extrudes through the vulva, having the inverted vagina for a covering.

The prolapsing uterus may be related to the vaginal walls in either one of two ways: the prolapsing vaginal walls may drag the uterus down after it, or the uterus itself may descend along the vaginal canal by force of its own weight and drag with it the reduplicated vaginal walls. Extreme prolapse of the uterus, the organ being covered thus by reflected vaginal walls, has given rise to considerable confusion in pathology, and by many standard authors wrongly has been called hypertrophic elongation of the cervix uteri. In a given case, the possibility of infra-vaginal elongation may be settled easily by placing the patient in the knee-breast position, when the uterus of its own weight will fall toward the diaphragm and the reduplicated vaginal walls will un-

fold and utero-vaginal attachment will appear in the normal place instead of being, as it seemed to be, high up on the walls of the uterus. Those cases in which reduplication of the vaginal walls does not almost entirely explain apparent great elongation of the cervix, are rare exceptions. When formerly these mechanical conditions were attributed to hypertrophic enlargement of the uterus itself, and were regarded as adequate indications for the removal of the cervix, the surgeon, in the attempt to remove what he supposed was the elongated cervix uteri, sometimes invaded the bladder anteriorly and the rectus posteriorly.

*Surgical Treatment.*—In passing, it may be well to mention, for the purpose of condemning it, an operation perhaps more frequently performed than any other for the cure of complete descent, namely, the operation which generally passes under the name of Stoltz. This operation is designed to narrow the vagina, and thus to maintain the uterus somewhere in the pelvis above the constriction. Operations of this class usually consist of the removal of an elliptical piece from the anterior or posterior vaginal wall, or from both, and of closing the exposed surfaces by means of a purse-string suture. No effort is made to destroy the normal axis of the uterus and vagina. The whole purpose is to make the vagina so narrow that the uterus cannot pass through it. Such operations generally fail, because they leave the uterus and vagina in the same axis, and because the restricted vagina cannot resist the downward force of the uterus, which almost invariably dilates the vagina a second time and forces its way through with reproduction of the hernia. Moreover, the operation always does permanent harm, because it shortens the vagina, thereby making it draw the cervix away from the sacrum towards the pubes, so that the body of the uterus may have room to fall backward to the position of incurable retroversion. We may, without discussion, perhaps, throw out all operations belonging to the Stoltz group. The same may be said of all plastic operations in which the vaginal surfaces are exposed by superficial denudation and brought together by sutures.

After a prolonged trial of the principal surgical procedures which have been made use of for the cure of complete descent, I am prepared to lay down certain essential principles, as follows: An efficient operation on the vaginal walls should have for its object, not narrowing the vagina, but restoring the normal direction of it with a double purpose, so that (a) the upper extremity, together with the cervix uteri, shall be in its normal location within an inch of the second and third sacral vertebrae, just where the utero-sacral ligaments would hold it if their normal tonicity and integrity could be restored, and so that (b) the lower extremity of the vagina shall be brought forward against the pubes. The fulfilment of these two indications will restore

the normal obliquity of the vagina, and will hold the cervix uteri so far back toward the sacrum that the corpus uteri must be directed forward in its normal anterior position of inobile equilibrium. With these conditions, the uterus being at an acute angle with the vagina and having little space posteriorly, cannot retrovert and turn the necessary corner which would permit it to prolapse in the direction of the vaginal outlet. In order to accomplish this, two things usually are necessary :

### 1. EXCISION OF THE CYSTOCELE.

*Anterior Colporrhaphy.*—The plastic operations performed on the anterior and lateral walls of the vagina by Sims, Emmet, myself and others, which have consisted of superficial denudation and reefing of the anterior or lateral walls of the vagina, have been only partially successful, first, because they did not adequately force the cervix uteri into the hollow of the sacrum ; second, because efficiency requires deeper work than superficial denudation can accomplish, and third, because these operations did not utilize the broad ligaments sufficiently for support.

The above principles, emphasized by Reynolds in a recent paper, have led me to modify my own operation materially. Complete prolapse, being hernia, should be treated according to the established principles of herniotomy by reducing it and then excising the sac in such a way as to expose strong fascial edges, which should be firmly united by sutures. The absurdity of treating any other hernia by superficial denudation and reefing or tucking in the surfaces by sewing them together must be apparent to any one. In order to indicate the part which the broad ligaments must have in a correct operation, it is only necessary to observe the fact that vaginal hysterectomy commonly results in holding up the pelvic floor and with it the rectum, vagina and bladder, because in this operation the broad ligaments are usually fixed to the vaginal wound. But why should not the same result be aimed at by similar means, even though the uterus is not removed? The operation which I would urge is performed as follows :

*First Step.*—To split the the antero-vaginal wall—that is, the vaginal plate of the vesico-vaginal septum—by means of scissors, from the cervix uteri to the neck of the bladder, then to strip off the vaginal from the vesical layer of the vesico-vaginal wall and cut away the redundant part of the vaginal plate.

*Second Step.*—The redundant part of the vaginal wall having been removed to extend the incisions and remove the mucous and sub-mucous structures to either side of the uterus, being sure to reach the fascial structures, which are in direct connection with the lower margins of the broad ligaments, or, what is better, to reach the ligaments themselves.

*Third Step.*—To introduce silk worm gut or chromic catgut sutures so that when tied they will draw the loose vaginal tissues and the broad ligament structures on either side of the cervix uteri in front of the cervix so as to force the cervix back into the hollow of the sacrum.

*Fourth Step.*—The sutures introduced in the third step having been tied, additional interrupted sutures are introduced to unite the vaginal wound from side to side; this suturing is continued to a point near the urethra, when most of the redundant vaginal wall will have been taken up; there will usually remain however, the lower portion of the cystocele and perhaps some urethrocele, which cannot be disposed of by bringing the margins of the wound from side to side, but can be taken up by uniting the remaining part of the wound in a transverse direction.

Even at the risk of prolixity I repeat that it is essential to remove the entire thickness of the vaginal layer of the vesicovaginal septum.

*Contraindications to Elytrorrhaphy.*—Elytrorrhaphy is usually unnecessary, and therefore contraindicated in descent of the first degree. The special province of the operation is in complete prolapse or procidentia when associated with cystocele. The operation further is contraindicated by tumors and adhesions which render replacement and retention impossible, and in diseases of the uterus or its appendages, which demand their removal. When such contraindications do not exist, elytrorrhaphy and perineorrhaphy in a majority of cases are quite as effective, and therefore to be preferred to the more dangerous and mutilating operations of hysterectomy.

## 2. PERINEORRHAPHY AND POSTERIOR COLPORRHAPHY.

As already stated, it is most important to appreciate the fact that in nearly every case of procidentia the lower extremity of the vagina is displaced backward. This is consequent upon subinvolution of the pelvic floor, and especially upon subinvolution or rupture of the perineum or of some other portion of the vaginal outlet. Unless, therefore, the posterior wall of the vagina and the perineum can be brought forward to their normal location under the pubes, so as to give support to the anterior vaginal wall, the latter will fall again, will drag the uterus after it, and the hernial protrusion (cystocele and prolapse) will be reproduced. The treatment, therefore, of procidentia must always include an adequate operation on the perineum, or, more comprehensively speaking, upon the posterior wall of the vaginal outlet. The operation must be performed so that it will carry the lower extremity of the vagina forward to the normal location close under the pubes; then, if

the anterior colporrhaphy has been adequate, and has carried the upper extremity backward, the whole vagina will have its normal oblique direction, and its long axis will make the necessary acute angle to the long axis of the uterus.

*Hysterectomy*, if indicated, should be performed by the vaginal route. As an operation for procidentia, hysterectomy is open to the following comments: Procidentia, as already shown, is hernial descent, not merely of the uterus, but also of the vagina, bladder and rectum. Complete prolapse often occurs after the menopause, when the uterus has become an insignificant rudimentary organ, and therefore may be removed easily. Cases are numerous in which, after vaginal hysterectomy, the pelvic floor, and with it the vaginal walls, have protruded again through the vulva—a result which may be expected unless the operation has included anchorage of the upper end of the vagina to its normal location by stitching the severed ends of the broad ligaments into the wound made by removal of the uterus. The indications for perineorrhaphy as a supplement to hysterectomy are the same as after anterior elytrorrhaphy.

As laid down in the foregoing paragraphs, the utilization of the broad ligaments is the essential factor in the treatment of complete procidentia. The operation of elytrorrhaphy, above described, unfortunately either may fail to bring the lower edges of the broad ligaments sufficiently in front of the uterus to enable them to hold up the uterus and vagina, or the ligaments having been stitched in front, the stitches may not hold. Consequently, in complete procidentia, elytrorrhaphy, even though well performed, may fail; at least, this has been my experience in a number of cases. Therefore, the completely prolapsed uterus may have to be removed in order to secure the entire outer ends of the broad ligaments to the upper part of the vagina, and thereby give absolute support. As before stated, the operation should include the treatment of the hernial factor in the lesion, that is, removal of the redundant portion of the anterior vaginal wall. Generally speaking, the indications are somewhat as follows:

1. Extreme cystocele, not associated with the most extreme procidentia, should be treated by anterior colporrhaphy and perineorrhaphy.

2. Cystocele associated with complete procidentia properly, may be treated by hysterectomy, anterior colporrhaphy and perineorrhaphy. Anterior colporrhaphy in all cases.

3. Conditions intermediate between the two conditions indicated above, and cases of very feeble or very aged women, will call for special judgment whether hysterectomy be omitted or performed. It is, however, a fortunate fact that the completely

prolapsed uterus, even in aged women, is removed usually with ease and safety.

*Other Operations of Questionable Value.*—Other operations, designed to decrease the weight of the uterus by removal of it, are of questionable value. Amputation of the cervix to lighten the weight of the uterus has been practised much for the spurious hypertrophic elongation already described. Since this condition is rare, if not indeed unknown, it follows that it seldom will furnish an indication for amputation of the cervix uteri.

Alexander's operation and abdominal hysterorrhaphy belong to the surgical treatment of retroversion and retroflexion, not of procidentia. The object of these operations is to suspend the uterus from above. Hysterorrhaphy, which perhaps fulfills this indication better than shortening the round ligaments, may be indicated in cases of extreme relaxation of the uterine supports and greatly increased weight of the uterus. The results of it in complete procidentia, however, usually will not be permanent unless it is supplemented by adequate surgery to the vagina.



## EXPECTANCY OF LIFE IN MORBID CONDITIONS OF THE CARDIO-VASCULAR SYSTEM.

BY ROBERT J. DWYER, M.B. (TOR.), M.R.C.P. (LOND.)

Lesions of the cardio-vascular system, met with in the course of life insurance work, present much more difficult problems in prognosis than when met with in the consulting-room, or at the bedside. In the latter, indeed, the prognosis is usually a comparatively simple matter, the condition having advanced to stages characterized by abundant signs and symptoms which form ample data upon which to base a forecast. In the former, however, the disease is usually incipient, or latent signs being few, and symptoms scanty or absent. Again, when the subject presents himself as a patient, he does so with a frank and open mind, willing and anxious to give all the information he can in order to obtain relief. When the object, however, is life insurance, this aid is often denied us; owing either to ignorance, or it may be unwillingness on the part of the applicant.

Therefore, it follows that the utmost attention must be given to the diagnosis, and the most careful judgment brought to bear on every case of cardiac disease in which an application for life insurance is sought. The problems before an examiner in every such case are first of all to determine whether the heart is performing its function properly at the time; if so, at what cost to itself, and from this and other circumstances shortly to be mentioned, to say how long this will probably continue. In order that a satisfactory answer to these questions may be obtained, not alone must the condition of the heart be ascertained by the conscientious application of all the routine methods of examination, but the general condition of the patient must be noted, and a searching inquiry made into his family and personal history.

Among the most important, because most frequent, cardiac conditions upon which medical examiners have to give an opinion, are the various valvular lesions. It is proper, therefore, that we should primarily turn our attention to the consideration of these conditions. Few morbid changes in the body give such striking evidence of their existence as a valve lesion with its attendant murmur. Indeed, so impressive and so valuable is this sign as a means of diagnosis, that unless upon our guard we may give it undue importance in prognosis. In other words, in making a prognosis, to regard the sign rather than the condition. Formerly, when all cases of cardiac murmurs were rejected by life insurance companies, this was not a matter of so much importance. Now, however, that a certain percentage of such cases are rightly admitted to life

insurance, it is a matter of great importance to be able to identify and separate this group from those who are not admissible.

This identification is to be made not by regarding merely a given murmur, but by careful consideration of many other circumstances. Murmurs, indeed, have but a limited value even in diagnosis. They may be present when no valvular lesion exists, or again may be absent in severe valve lesions.

Even when denoting the existence of a valvular defect, they form little or no measure of its severity. From the standpoint of life insurance we may divide all cases of valvular disease into three classes:

1. Those in which the only evidence of a lesion is the presence of a murmur.

2. Those in which, in addition to the murmur, other signs, such as hypertrophy, or modification of the normal sounds are found.

3. Those which, in addition to the foregoing, present symptoms, such as dyspnea, cyanosis, etc.

The last group may be dismissed at once, for already terminal symptoms are present, and with few exceptions, life will terminate in three or four years.

Many of those in the first two groups, however, have a brighter outlook before them, and there may be found a few good risks, some fair and more impossible.

In order to decide in which class a given case should be placed, it will be necessary to direct careful attention to the following points:

1. The nature of the lesion.
2. The age of the applicant.
3. The cause and duration of the lesion.
4. General physical condition of the applicant.
5. His personal history.
6. His family history.

Taken in the order of severity, the greatest valvular defect is aortic regurgitation, then comes in order mitral stenosis, aortic stenosis, and lastly, mitral regurgitation:

Aortic regurgitation may be practically excluded from consideration. From its general tendency to increase, and the danger of sudden death, it is a condition too formidable to be considered as a justifiable risk for insurance. Clifford Allbutt says that ten years is a long period for this lesion. Broadbent, however, speaks more hopefully, and says that with the second sound heard in the carotid, and with hypertrophy slight, such a lesion, resulting from a rheumatic attack, may exist for many years without giving rise even to discomfort.

Such cases, however, are the exception, and the lesion, if

established early in life, will probably terminate the latter, shortly before middle age is reached.

Where the lesion develops later, as the result of degenerative changes, the prognosis is much worse; at the most two or three years will be the duration of life.

The same is true when it is the result of syphilis or excessive physical strain in early manhood.

#### MITRAL STENOSIS.

Here also we have a valve lesion, essentially so grave that very few, if any, of its victims would be accepted by life insurance companies on any terms.

The average duration of life for those suffering from this lesion is 33 years for men 35 or 36 for women.

The gravity of the lesion is the result of the inherent tendency to increase in severity, and its intimate relationship to the pulmonary circulation, whereby any attack of bronchitis or pneumonia injuriously affects the already embarrassed right heart. Exceptions, however, occur to this rule.

Quite recently I performed an autopsy on the body of an aged woman, dead of pneumonia. She was upwards of seventy years of age, and had for some time suffered from paralysis agitans. On examining the heart, the mitral orifice was found to be markedly contracted, due to thickening and adhesion of the mitral flaps. Such examples, however, must be rare.

In connection with mitral stenosis, attention may be called to its occasional latency and consequent difficulty of diagnosis. When accompanied by its characteristic presystolic thrill and murmur at or near the apex, with its peculiar snapping first sound, it cannot be mistaken; but in this lesion, more than any other, the murmur is notoriously variable.

In some cases it may be at times entirely absent, and if we relied upon the presence of a murmur to make the diagnosis, the condition would be overlooked. In such a case a hint would be given by the characteristic first sound. If with such a first sound the area of cardiac dulness was found to be increased upwards and to the left, along the third rib, and the pulmonic second sound was found to be accentuated; if with these signs there is any pulsation to the left edge of the sternum, it would be justifiable to suspect the existence of mitral stenosis, and this suspicion will be strengthened if there is the slightest indication of cyanosis or breathlessness.

#### AORTIC STENOSIS.

If all cases presenting a systolic murmur, heard at the second right interspace and transmitted up over the sternum into the

neck, are to be called aortic stenosis, this lesion will be found to be not alone the most common but the most harmless of all cardiac diseases. But it is found that the large majority of cases in which this murmur is present have no narrowing of the aortic orifice. The causes which produce this murmur, apart from aortic constriction, are blood conditions giving rise to the hemic or functional murmur; roughening of the valve cusps either from endocarditis, or deposit of lime salts; more rarely, congenital fenestration of the valve may give rise to a murmur, and, lastly, dilatation of the aorta itself may cause a murmur similar to that of aortic constriction.

Excluding those in which the murmur is due to some blood condition and which are, therefore, of no importance in prognosis, and also those in which the lesion is dilatation of the aorta and where the prognosis is, therefore, very grave, there are still many cases which would be eligible for insurance, either as fair or doubtful risks.

It is in this class of cases that we must carefully consider the different points previously mentioned. Of great importance is the cause of a given defect in the valve. Rheumatic endocarditis is the most favorable. Syphilis and degenerative changes are very unfavorable causes, and should lead to the rejection of the applicant, not on account of the valve lesion alone, but on account of the attendant conditions. The age of the applicant is also of importance. If at or before the middle of the third decade, provided syphilis is excluded, the lesion is probably due to rheumatism, and is, therefore, favorable. In the fourth decade, or later, degenerative changes may be suspected.

Generally speaking, too, the longer the duration of the condition, as conjectured from the attack of rheumatism, the greater probability is there of it being stationary, and, therefore, favorable.

The condition of the heart, apart from the murmur, should be most carefully ascertained. The presence or degree of hypertrophy will form a measure of the severity of the obstruction. The less hypertrophy the less severe the lesion. If with little or no hypertrophy there is a loud and long murmur, no increased tension of the pulse, and no change in the first sound at the apex, we may conclude that the lesion is unimportant.

Where, however, hypertrophy is pronounced, and the apex beat is markedly displaced downwards, the lesion is more severe and the outlook not so favorable. Further attention must be given to the applicant's personal history; his occupation, habits and social condition must be taken into consideration. Finally, his family history will be of importance. Absence of gout or renal disease will be favorable, while the history of these and a family tendency to early death will be unfavorable. While the

average age of death from this disease is placed at forty, a fair number may go for several years longer. Once, however, symptoms of cardiac embarrassment have arisen in this disease, even in the earlier adult life, the prognosis is decidedly unfavorable.

#### MITRAL REGURGITATION.

This lesion is not alone the most common, but is the least grave of all the valve lesions. In giving a prognosis the same considerations must be born in mind as were spoken of in the previous lesion. The large majority of cases result from rheumatic endocarditis. Following this, degenerative changes, such as calcareous deposit and dilatation of the left ventricle from myocardial conditions, are causes to be born in mind. Where the lesion is the result of endocarditis, and where the leakage is moderate in amount, as shown by the position of the apex at or just without the nipple line, and when from its duration it is probably stationary, the prognosis is good and life will be prolonged into old age.

Even when in addition to all the physical signs of the lesion being present, there are also symptoms of cardiac failure, such as cyanosis and dyspnea, recovery may take place, and the patient live for many years in comfort.

When the lesion is due to dilatation of the ventricle, causing a relative incompetence, the prognosis will depend upon the cause and the age of the patient. If due to some acute condition, such as typhoid fever or diphtheria, or if occurring in the course of anemia or alcoholism—if it be in early adult, or even later life, complete recovery is often possible.

If however, the dilatation is the result of coronary arterial disease, a lesion of middle life, the prognosis is very unfavorable.

Many cases of mitral systolic murmur, occurring at or after middle life, may exist for upwards of twenty years without change or discomfort. In such cases the murmur is due to roughening and thickening of the valves, the actual leakage being little or none. Here the prognosis depends, not so much on the valve condition, as upon the attendant conditions, viz., general arterio-sclerosis.

In all cardiac valve lesions, no matter of what variety or degree of severity, particular attention must be given to the character of the pulse as regards its tension and frequency. A high pulse tension is, in many individuals and families, a constant condition, even in the absence of any pathological change. Should a valve lesion develop in such an individual, the prognosis would be much less favorable than in an individual with a pulse of low tension, for with high pulse tension the heart will be less able to overcome the valve defect, or having done

so, will break down much earlier. To a less degree the same may be said of one whose pulse rate is habitually much above the average.

By a careful consideration of all the facts in each case, as above indicated, there is no doubt that a considerable number of those possessed of some of the valve lesions could with safety be insured.

In this connection it is to be borne in mind that little must be known of the length of the latent period in many of the subjects of valvular affections. By the latent period one means the length of time elapsing between the establishment of the lesion and the onset of cardiac breakdown.

Observations of the first event are common enough, occurring, as it does, in an attack of rheumatic fever or other acute disease, but it is only when the second event occurs that the case is again brought to notice, and the duration of the condition can be thereby determined.

Just what percentage of cases, in which a valve lesion once established never gives rise to any symptoms throughout a long life, is unknown. An appeal to the post-mortem records of hospitals will not give an accurate answer, for an undue proportion of such subjects are the victims of poverty and of vicious habits; conditions which would not apply to the class of persons able to buy life insurance. Every physician, however, of experience has knowledge of cases where, notwithstanding the existence of some valve lesion, which has probably been present for a long period, no inconvenience has resulted, and life has been ended by causes quite apart from the cardiac defect.

In this connection the following brief outline of a case, under my observation, may be of interest:

Six years ago, a farmer, aged 33, consulted me for some dyspnea, precordial distress and rheumatic pains. His family were rheumatic, and his father had died about the age of sixty of some cardiac condition. He himself had had two attacks of rheumatism; the first one fourteen years previously; the second two years previously to the time I saw him. In both attacks had suffered "pain in the heart." At the time I first saw him he was disturbed by various subjective complaints, as he was markedly neurotic.

The cardiac condition was of great interest. He had a loud, high pitched, musical diastolic murmur, which he himself could hear quite distinctly. It was heard from the second rib on the right side down the sternum, and out almost to the nipple line. The pulse was soft and a capillary blush in the fingers and the forehead. The heart was not enlarged, and the impulse did not indicate hypertrophy. The rhythm and site of the murmur pointed to aortic regurgitation. I have seen him at intervals

ever since. One year ago the murmur could hardly be detected, then only on exertion, or on taking a full breath. For the past six months it has been entirely absent. In every respect the heart and blood vessels are absolutely normal. There is no increase of the pulse tension, or of cardiac dulness, or strength of impulse, such as might signify the possible transition of a regurgitant lesion to a stenotic one.

As he is at present, one unacquainted with his past history would, without hesitation, admit him to life insurance on the usual terms. This case is all the more interesting in that the lesion was the most serious of all the valve lesions, viz., aortic regurgitation.

To conclude, I might cite a number of cases which I have been watching for years, subjects of mitral disease, and in whom there have been, as yet, no evidence of cardiac embarrassment.

REPORT OF A CASE OF DOUBLE OTITIS MEDIA,  
WITH MASTOID INVOLVEMENT.—OPERATION  
AND TERMINATION IN FATAL  
PURULENT LEPTOMENINGITIS.\*

BY DR. J. D. GIBB WISHART, TORONTO.

Dougal Bell, referred to me on Sunday, January 10th last, by Dr. W. J. McCollum, had suffered from an attack of *la grippe* three weeks previously, followed by pains and discharge from both ears at the same time. The discharge had been free and odorless, and the usual treatment had been pursued, but without relief of the pains.

The patient was a workman of somewhat slight build, 51 years of age, but apparently over sixty, pale, anxious, and very deaf. He stated that he had suffered from shooting fugatory pains in the head, for the most part radiating from both ears to the vertex, but not continuous, while the ears felt full and the tinnitus was persistent on both sides. The amount of discharge had been keeping about the same, although he was faithful in the use of the syringe, which he thought made the canals very sore.

Examination showed a fairly abundant discharge from both middle ears, issuing from very small perforations behind and below the umbo in each. The bony walls were not puffed, but were pale and profoundly sensitive, especially along the posterior walls. This sensitiveness did not seem to correspond with the other conditions present. Externally, beyond a slight tenderness toward the apices of the mastoid processes, there was an entire absence of swelling, tenderness, redness, or pain on deep pressure or percussion. Hearing for the watch was nil, and for the voice very poor. The nasopharynx was sub-acutely inflamed.

Next day, under chloroform, which he took very badly, an opening was made through the membrane on both sides by a sweeping incision through the posterior circumference for about one-third, close to the ring. Frequent syringing of the ears, and daily applications of a 1-40 carbolic solution, with tonics and nourishing diet were prescribed.

The patient visited the office on the 17th of January, when the general conditions were found to be about the same, but the pains were not so severe, and the drums were well opened, and discharges muco-purulent and sweet.

On the 21st of February Mr. Bell returned, on the advice of his physician, complaining that he was no better, quite as deaf as before, and frequently awakened from sleep by the pains in his head. On this occasion I found that the openings in the membranes were much smaller, the discharges, while easily removed, recurred persistently, the walls still hyperæsthetic,

\*Read at meeting of Toronto General Hospital.



but the appearance of the parts otherwise just as before. Externally, there was still an entire absence of swelling, tenderness, redness, or pain on deep pressure or percussion over the surface of both mastoids. The slight tenderness at the point of the right mastoid tip was, if anything, increased, and it was to this side that he referred most of his fugatory pains. Vertigo, nausea, stiffness of the neck, and any symptoms referable to the eyes were also absent.

Believing that mastoid disease was the only explanation of the welling up of the discharges, and of the pains, I advised him to enter the General Hospital for the purpose of making an exploratory incision in the right mastoid at least. At the same time I had no well determined indication of the presence of this invasion of the mastoid, as the hyperæsthesia of the external auditory canals, without congestion or swelling, led me to undervalue the head pains.

Upon admission to the Hospital four days later, the temperature was 98° Fahr., pulse 78, and respirations 20. On February 25th, the operation was performed under chloroform. The right mastoid was opened with difficulty, the outer bone being eburnated, but when once this was pierced the whole of the process was found to be broken down, and was entirely removed, the lateral sinus coat being laid bare for three-quarters of an inch. The walls of the aditus were sound, and fluids were easily syringed through the wound and out of the canal. There was no evidence of disease of the tegmen tympani, and the sinus was healthy. Pus was not abundant, and considerable pale granulation tissue was found.

Finding the right mastoid so seriously involved, I at once determined to open the left while the patient was on the table. Here the outer bone was equally sound, but thinner, and the cavity of the mastoid even more extensively diseased than on the right. The lateral sinus was also exposed, but was apparently healthy, and there was no evidence of a path of invasion of the brain cavity.

Both incisions were stitched, the cavities being packed with gauze, of which the ends were left protruding through the lower angles of the wounds.

Pain was completely relieved, and healing proceeded in a regular, though slow manner, the temperature never rising above 99.6° Fahr., and alternating between this and 97.8° Fahr. during the whole of his stay in hospital, which he left on the 5th of April. The course of the temperature was, however, irregular, being highest in the mornings, and practically never failing to be above normal at some period of the day. The left ear stopped discharging early, but the right was more persistent, the discharge being rather mucous than purulent in character, and odorless. Repeated examinations with the probe failed to

detect any evidence that granulation was not proceeding evenly everywhere.

The week before his discharge, the patient had an attack of vertigo, almost falling to the floor of the bathroom, accompanied by marked nausea and some vomiting. The temperature and pulse were not affected, but the tongue was furred and the bowels sluggish. The eyes were examined with the ophthalmoscope by Dr. Trow, and the ears very carefully explored by me, without anything being detected amiss. The attack was ascribed to over-indulgence in a series of heavy meals, causing indigestion in a man accustomed to abundance of outdoor exercise.

On the twelfth day after his discharge I was again summoned to see Mr. Bell by his physician, and found that the day previous there had been a return of the vertigo, accompanied by headache, vomiting and some elevation of temperature. These latter had continued and increased until the patient became partially comatose and very restless. I found the pupils reacting very sluggishly, and unequally, face flushed, temperature 102° Fahr., respirations 20, pulse 88, soft and irregular in volume, but the patient roused himself somewhat in answer to my questions. He was at once removed to the hospital, where he rapidly became comatose and never regained consciousness. At the time of admission the deep reflexes were present but not marked, cremasteric reflex present. Pupillary diameter 3 m.m. in left, and 3.5 m.m. in right. Babinski's sign absent. Urine was reddish yellow, specific gravity 1032, acid, clear with sediment, urea 4 per cent, excess of urates, no albumen or sugar. Widal's blood reaction was negative.

A consultation was held the day following with Dr. McDonagh, who agreed that no operative procedure was admissible.

The patient became steadily more comatose, quite hyperaesthetic, and on the 20th developed a somewhat spastic condition of the left arm and leg.

The temperature remained between 101° Fahr., and 102.5 Fahr., until the same day when it shot up to 105°, and became 106° just before death, which occurred April 21st, at 6.15 a.m.

The post-mortem examination was made the day following, and you have the brain before you for inspection. The right tympanic plate was softish, being easily penetrated by the point of the knife, the bone forming the roof of the aditus on its inner side, and of the inner ear was broken down, a small amount of pus being present. There was, however, no direct evidence of extension by necrosis to the brain at this point. On the left side the tympanic plate was firmer, although the inner appearances were not healthy.

The brain presented the typical characteristics of a purulent leptomeningitis, and no abscess was found.

There was no evidence of thrombi at any point, and the

condition of the organs and other structures presented no features of importance.

On looking over this case of failure the following points stand out prominently:

(a) The absence of the ordinary indications of mastoid involvement.

(b) The large amount of destruction discovered.

(c) The absence of indication at the time of operation of the extension of the process to the tegmen tympani.

(d) The peculiar character of the temperature during convalescence, and the absence of symptoms of extension till the onset of vertigo in the first instance.

(e) The mistake in accounting for the first attack of vertigo.

(a) Unfortunately, we have too many cases which, on the post-mortem table, point out the unsuspected cause of disease to have been located in the mastoid, and yet the operation is one which no one cares to advise without good evidence of the process being involved. This case gives a much needed lesson of the evil of delay. The presence of the flying pains, and the hyperæsthesia of the bony canals probably indicated an exploration of the mastoid at the time the patient was first seen by me. *Absence of pain, tenderness, redness and swelling in the mastoid do not indicate its freedom from disease.*

The manner of the discharge of the pus from the middle ear did not at any time alone indicate the necessity of surgical interference.

(c) Was the tegmen tympani involved at the time of operation? I presume it must have been, although my careful search failed to detect it at that or the later stages. The serious conditions found in the mastoid might have, perhaps, been my warrant for removing the posterior wall of the auditory canals, and the outer wall of the attics. My previous experience of many cases has not been such as to indicate this, however.

(d) Was the temperature of convalescence such as to warrant a further exploration without other evidence? It certainly was not a normal temperature, and yet I must confess it did not give me any anxiety. Had there been pain I would have been put upon my guard.

(e) The first attack of vertigo was wrongly put down to indigestion, and yet, although I was suspicious, still I fail to see that there was sufficient to indicate further exploration.

The whole case is one more instance of the great risk our patients run who suffer from attacks of middle ear inflammation as a complication of the grippe; and this year's variety has been unusually prolific of such involvement. Mastoid symptoms are never to be trifled with, and the sooner a diseased mastoid is drained the safer for all our patients, be the case chronic or acute.

## Selected Article.

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### FEEDING AND THE REST CURE IN TYPHOID FEVER.\*

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By H. A. HARE, M.D.,

Professor of Therapeutics in the Jefferson Medical College of Philadelphia.

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In casting about for a subject which would be worthy of attention this evening I confess that I have had some difficulty in deciding upon the theme which would prove most interesting. On the one hand I might bring before you certain questions which can only be decided by experimental research, and on the other it is possible to call your attention to equally timely, but more practical, subjects, which perhaps can be immediately utilized with advantage in practice. In addressing a body of medical men which possesses a wide clinical experience, obtained first in the wards of the Presbyterian Hospital, and secondly in private practice, one cannot help feeling that he occupies the position of one who comes to obtain information rather than to give it. This is my attitude to-night, and if in the course of my remarks I touch upon subjects which seem to you hackneyed and already exhausted, you must recognize that they are themes which strike me as being of importance in my own experience in which perhaps you may be interested, and from which, in the discussion that I hope is to follow, I may perhaps gain much from the ideas which will be advanced by those who are first courteous enough to listen to me.

The first subject of which I wish to speak is that which deals with the question of the amount of food which should be given a patient suffering from typhoid fever at the three stages of his disease. I think that every one is agreed that during the first week of his illness the diet should be liquid, since at this time all portions of the body are apparently less able to carry out their functions in a normal manner than they are in the second and third week of the disease. In cases which have considerable severity at onset it has always seemed to me that the digestive system was more disturbed in the first few days of illness than later on. I am one of those who are firmly convinced that for many years we have been making a grave mistake in confining patients suffering from typhoid fever to a purely milk diet. This fact was borne in upon me forcibly about seven years ago when suffering from a prolonged attack of typhoid fever, which, while it was severe in many respects, particularly in its complications, nevertheless left my brain

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\* Read before the Alumni of the Presbyterian Hospital, New York, May, 1901.

during most, if not all, of the illness as capable of thought as it is at this moment. While I did not suffer from hunger in the sense of having an appetite, I was continually conscious of the fact that I was underfed, and I also knew that even when in health I could not take large quantities of milk with good results. When it came to the ingestion of considerable amounts of what might be called "hospital milk," I felt that I was receiving little more than water, and many hours of thought convinced me that on the one hand I was being attacked by the bacillus of Eberth, and that on the other my powers of vital resistance were being reduced by partial starvation.

Immediately after this I began giving those cases of typhoid fever which came under my care a varied diet of liquid and semi-solids, and since that time I have been greatly impressed at each term of hospital service by the advantages of this method of feeding. We must recollect that the average adult requires at least 2,500 calories a day for normal existence, and as each quart of milk represents only about 500 to 600 calories, it is evident that for a patient to receive the total number of calories required for the maintenance of his body he must drink not less than four and a half quarts of milk a day. These facts further impress us with the utter inadequacy of the pure milk diet in this disease. Nor can we help appreciating the fact that we are overloading the organs of absorption and elimination with an excess of fluid, which certainly cannot be advantageous, although, of course, an excess of liquid in typhoid fever is preferable to a lack of it.

Again, I can see nothing in the clinical history or pathology of this disease which in any way justifies us in disordering metabolism by the institution of a rigid single diet; and I doubt if there is a man in my audience who can go to bed for a period of a month or six weeks and receive an absolute milk diet for that period of time without emerging very much the worse for wear.

It is my custom to give all patients after the first week of typhoid from one to two soft-boiled eggs a day in addition to the ordinary allowance of milk, and to vary their diet by the use of curds and whey, rice which has been boiled to a pulp, barley, wheat, and oatmeal gruel, and a cup of corn-starch with vanilla or some other flavoring substance of a like character. As a result I very rarely see the marked ataxia which is so common a symptom in convalescence from typhoid fever. The patient's nutrition is so well preserved that he is but little more emaciated than many cases of acute pneumonia at the time of recovery. Secondary complications like furuncles and bed-sores are unknown, for by the use of a plentiful supply of food the patient's vital resistance is maintained to such a degree that simultaneous collateral infections do not take place. The

average case of convalescent typhoid fever is a fair mark for any infection because it is half starved.

Recognising that typhoid fever is characterized by a deficient secretion of digestive juices, all these patients receive hydrochloric acid and pepsin when proteids are administered, and taka-diastase and pancreatin when carbohydrates are used. I have never seen any bad symptoms arise as the result of this plan, and I am quite sure that I have seen an immense amount of good follow. I am not friendly to the use of beef tea, which I believe acts as a first-rate culture medium and frequently increases tympanites and diarrhea, the stools becoming fetid under its use.

For many years I have been much dissatisfied with the various theories which have been advanced to explain all the good effects which follow the use of cold bathing in typhoid fever. Most of my auditors will remember that but a few years ago the good effects of cold plunging were supposed to depend chiefly upon the fact that by this means we were able to bring the temperature approximately to normal. Increasing experience has, I think, taught us that the mere reduction of the temperature is the least of the results which hydrotherapy brings about. We must believe, on the other hand, that the readjustment of the circulation or the re-establishment of the normal circulatory equilibrium is the chief benefit derived from this method of treatment, and there can be no doubt, I think, that the great increase in the elimination of toxic materials in the urine after the cold bath depends upon this readjustment of the circulation and the increased rapidity with which toxic blood is taken to the kidneys where it can be purified. A number of years ago there appeared in the *Australasian Medical Gazette* a paper by one of the staff of the Brisbane Hospital, in which he reported a large series of cases of typhoid fever treated not by the use of the cold bath but by the employment of the tepid bath—a method instituted at first because the climate was so hot that ice was difficult to obtain, and subsequently adhered to because the results which were obtained fully equaled and indeed surpassed those which were reached by the use of ice-cold water. In these baths, as well as in the cold baths of Brandt, we all know that active friction is a factor of very great importance, aiding the dissipation of body heat, and the longer I study this matter the more convinced I am that active friction in these cases is an exceedingly important part of the treatment, not only because it aids in the dissipation of heat and readjusts the circulation, but also because it exerts upon the patient beneficial effects which follow the use of massage when we employ the rest cure in the treatment of neurasthenia.

Some months ago, when Dr. Mitchell read his first account

of the early cases in which he instituted the rest cure, he took pains to point out that he failed dismally in good results from rest in bed and forced feeding until in addition he provided passive exercise in the form of massage.

Personally I have come to consider that the value of the modern method of treating typhoid fever by cold depends in great part upon the fact that when cold bathing is used the typhoid fever patient, who is undoubtedly suffering from a form of toxemic neurasthenia, receives throughout his illness a form of rest cure which maintains strength and puts him in first-rate physical condition in much the same manner as we endeavor to do for nervous wrecks in the social world. In other words, I do not believe that the free use of cold water in itself is the chief factor for good in these cases, but that if we amply feed and thoroughly rub our patients, a great portion of the good comes from these measures. In other words, I would advocate the employment of the Weir Mitchell rest cure in the treatment of typhoid fever.

I have also been very much impressed with two additional facts in this connection. One is that equally good results can be obtained in typhoid fever if patients are properly sponged with friction instead of being plunged. The same fall of temperature, the same reaction, the same reddening of the skin without cyanosis and congestion, can be produced by sponging with friction. I have never seen a temperature which could not be reduced by proper sponging or ice-rubbing, even better than by the plunge bath. The sponging possesses the additional advantage that the patient does not have to be moved from his bed; that the great muscles of the back can receive even more attention than the anterior portion of the body, thereby increasing the dissipation of heat very greatly and preventing creasing of the skin and the formation of bed-sores. For several years I have never plunged my patients, and have always sponged them. My experience is, however, that every new nurse that sponges for me has to be instructed in the proper use of friction, and in any instance in which the temperature fails to fall under this method I feel confident that the fault is in the way the nurse does the sponging and not in the method itself.

The second point is that many patients suffering from typhoid fever are profoundly toxemic when their temperature is considerably below  $102\frac{1}{2}^{\circ}$ , the point at which the cold plunge is usually considered wise. Such patients are not given the cold plunge for the very good reason that if they receive it their temperatures may become subnormal, and they may collapse. The toxemia is permitted to persist, because the temperature has not risen high enough. Under these circumstances I believe that we should resort to tepid baths. I feel convinced that I have repeatedly saved life by the use of tepid or even hot water

used with sponging and friction in toxemic cases which were certainly too feeble to bear cold. By the use of hot or tepid water with friction, circulatory equilibrium can be re-established, toxemia diminished, and even the temperature reduced to normal.

The next point I wish to consider is the question of the administration of alcohol to typhoid fever patients. Before I fed these cases so well I used very much more alcohol than I use at present, and I was firmly convinced of the fact that it did these patients good. I still use it quite largely, but, with good feeding, I can get along with much less than formerly, probably because the patient burns up food products in the body instead of burning up alcohol.

Closely connected with this question of the administration of alcohol is that which deals with the manner in which it can do good in typhoid fever. It has been shown so conclusively by a host of scientific investigators that alcohol is not a true stimulant in the sense in which we employ that term in connection with drugs which increase the functional activity of various organs, that we cannot ignore the fact that in the past our views concerning its mode of action were erroneous. On the other hand, the experience of a vast number of practitioners has been almost without exception in favor of the proper employment of this drug in typhoid fever, and surgeons innumerable are prepared to assert that iron, alcohol and quinine are the best means of combating various forms of bacteremia, admitting, it may be, that they know not how they do good, but asserting vehemently that they are invaluable.

At the present time it would seem likely that we are standing on the threshold of therapeutic discoveries which make all previous ones seem insignificant. Ehrlich's theories in regard to antitoxic bodies, receptors and haptophores have thrown a flood of light upon many physiological and pathological processes, and I believe are destined to show that many of our therapeutic measures which we have thought rested upon a scientific basis have been purely empirical, in the sense that we have been entirely ignorant of the manner in which their effects have been produced. In other words, as an illustration of this, in the past we have called alcohol a stimulant, thinking only of the circulation, the kidneys and respiration. It is quite possible that it does not act as a stimulant upon these functions, but upon other functions which are of equal importance in the human body, and are connected with immunity and the ability of our bodies to resist infection. It would seem probable that certain drugs, such as those I have named, for example, may exert an influence upon the body by means of which the processes of artificial immunity are greatly increased.—*Therapeutic Gazette*.



# Progress of Medical Science.

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## SURGERY.

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IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH  
AND F. W. MARLOW.

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### **An Original Method of Removing Needles from the Tissues** is described by E. W. SHENTON in *Medical Electricity and Radiology*.

The needle is first accurately located by means of the X-ray; the limb is then turned so as to foreshorten the needle until it appears as a single point. An ink spot is made upon the skin corresponding to the one end of the needle, and upon the opposite side of the limb is placed another spot. A line joining these points will pass through the long axis of the needle. The tissues are now taken between the thumb and finger, and pressure is exerted on the two ink spots. The needle will, by this procedure, be moved toward the surface corresponding with its sharper end. The tissues are slowly and evenly compressed, and time is allowed between each pressure so as to allow them to regain their natural position. The needle will always travel to the surface which is nearer to its sharper end, and if this is too blunt to penetrate the integument a small prick with a scalpel will be sufficient to extract it. C. R. S.

### **Rupture of the Posterior Urethra.**

Weller Van Hook of Chicago in the *Medical Record* of August 20th treats of rupture of the posterior urethra. He advocates immediate perineal section as the only rational treatment for complete lacerations of the male urethra. Clinical experience and experiments upon animals have shown the regenerative powers of the urethral tissues to be very great. Extensive portions of the urethra may be restored in their entirety without recourse to a plastic operation. The writer condemns the attempt to pass a catheter, often difficult or impossible, on account of the danger of infection occurring, often endangering life, and making a perineal incision for drainage imperative in the end. The technique is as follows: An incision beginning a half inch in front of the anus, and extending toward the scrotum an inch to an inch and a half. The skin is freely divided; the deep tissues are only incised to meet a grooved sound at a point posterior to the bulb of the urethra. The bulb is drawn forward by a blunt hook, and the distal end of the urethra is recognized by the sound passing through it.

The proximal end of the torn urethra may be found either by palpation of the smooth mucous membrane, or searching for it with a probe or catheter. The writer has found that it is usually possible to detect the upper end of the urethra by rolling it under the pubic arch, and then fixing it and making a longitudinal incision into it. The last resource is to do a suprapubic cystotomy and perform a retrograde catheterization. The ends are now freshened and drawn together by catgut sutures. The question of leaving a catheter in the urethra has been long discussed, but the weight of opinion is at present against the practice; the perineal wound, if left open, provides for drainage. The use of conical sounds is afterwards necessary to prevent contraction, whether a catheter has been left in the urethra or not.

When defects of the urethra are great enough to prevent approximation of the severed ends without too great tension, several alternatives are offered:

1. The method adopted by Ljunggren of suturing the tissues around a retained catheter.

2. Loosening the urethra from its bed. Defects of eight centimetres have been made good by mobilization of the urethra, especially if the lower extremities be extended at the hip joint during the operation.

3. Ekehorn employs an original method. A horse-shoe shaped flap, with its base above and the limbs of which are parallel to the spermatic cords, is dissected loose to the upper edge of the pubic bone. This flap, containing the scrotum and its contents, the penis and urethra, can now be drawn down.

4. Thiersch grafts may be used, or flaps of skin or mucous membrane may be utilized to bridge the gap in the ruptured urethra.

C. B. S.

### Rubber Gloves.

In the *Medical News* of August 20th, Howard D. Collins states that rubber gloves are often rendered septic by the manner in which they are put on. The left glove is worked on by means of the right hand, presumably not sterile, otherwise the gloves would not be used; or the glove is worked on under water, which has been previously contaminated by the hands. The water which drips from the wrist may also contaminate the wound later, or a defective glove may bring about the same result. The author sterilizes the gloves, turned inside out, by boiling them, lifts them from the sterilizer with *sterile* forceps, dusts them with sterile starch or lycopodium, turns them with forceps, and places them between sterile towels. They are put on by using sterile gauze, the hands not coming into contact with the gloves at all.

C. B. S.

### Clamp and Cautery Operation for Hemorrhoids.

Howard Lilienthal, in the *Medical Record* of August 27th, advocates a method of preventing the pain and œdema which occurs for several days after the clamp and cautery operation for hemorrhoids. After the clamping and burning he makes six or seven radiating incisions with scissors through the skin, going well into the subcutaneous tissues. This causes a free flow of serum for the next day or two, and prevents œdema with its danger of infection. This method has been thoroughly tested and has given great satisfaction, robbing the operation of its greatest terrors.

C. B. S.

### When and How Shall We Operate for Prostatic Hypertrophy?

An able paper by Willy Meyer, of New York, entitled, "When and How Shall We Operate for Prostatic Hypertrophy?" is published in the *Medical Record*, of June 25th. He holds that the *regular* use of the catheter by the patient who has enlarged prostate should no longer be a routine method of treatment. The author reserves "catheter life" for the well-to-do, intelligent class, who will faithfully carry out the necessary details of regular aseptic catheterism and vesical irrigation; and when neither patient nor physician is willing to take the risk of an operation, slight though it be; or where complications exist, such as advanced diabetes (5 per cent. sugar or more), chronic myocarditis and contracted kidneys.

He extends the age at which prostatectomy may be done, indefinitely, the patient's general condition being the only point to be taken into consideration when advising radical operation.

When prostatectomy, by either the perineal or suprapubic route, is contraindicated, and the use of the catheter has become intolerable, the author speaks highly of Bottini's operation in this otherwise hopeless class of patients. He gives the history of three such cases, in which favorable results were obtained.

The following conclusions are drawn:

1. In view of the present advanced status of prostatic surgery, the catheter should no longer be advised, but operative intervention should be urged as soon as the time for the regular use of the catheter has come.

2. Prostatectomy, being the most radical as well as the most surgical procedure, commands the first place in the treatment of the hypertrophied prostate gland, especially since the technique has been perfected to such a point as to render the operation a comparatively safe one, the mortality having been shown to be less than 5 per cent.

3. The perineal route seems preferable to the suprapubic, for

the reason that it enables the surgeon to do the operation more under the guidance of his eyes.

4. The choice of route in the average case will probably hinge on the question of preservation of sexual power, provided this point is of importance to the patient.

5. The patient's age, as such, does not furnish a contraindication to operation; it is his general condition merely that has to be taken into consideration.

6. Where the effects of general anæsthesia are feared spinal anæsthesia is indicated.

7. If the operation with the knife be refused or contraindicated, Bottini's operation (galvano-caustic prostatectomy), should be advised, since it, too, yields excellent results.

C. B. S.

# Editorial.

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## CANADIAN MEDICAL ASSOCIATION.

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The recent meeting of the Canadian Medical Association at Vancouver was successful to an extent far beyond the expectations of the majority. It is generally recognized that the success was largely due to the exertions and the magnetic personality of the President, Dr. Simon J. Tunstall. It is only fair to say, however, that Dr. Tunstall had behind him the profession of British Columbia, who worked together and succeeded in producing a programme which was satisfactory in all respects. The attendance was large, nearly three hundred being present.

The Association has been in existence thirty-eight years, and it is interesting to note that its first President, Sir Charles Tupper, is still alive and well. Many discussions have arisen in the past as to the desirability of holding all the meetings in one city, and many opinions have been expressed that Ottawa should be the city selected. There seems now, however, to be almost a consensus of opinion that the peripatetic method should be continued. Much force is given to such opinion by the decision this year to move from the Pacific to the Atlantic coast, *i.e.*, to hold the next meeting in Halifax under the presidency of our distinguished confrere, Dr. John Stewart.

Our friends in the West were much pleased about the support they received from the East. The lower provinces, Montreal, and many parts of Ontario sent goodly numbers of delegates. Toronto promised much, and did little—we are sorry to say. This city is inclined to boast of her prowess in matters educational: she has the largest medical college in Canada: she pretends to take a great interest in the welfare of our national Medical Association: she sent four physicians to the Vancouver meeting: and among the four there was not one professor of the Medical Faculty of the University of Toronto. We are assured, however, that this was largely an accident; and some of us derive a little comfort from the fact that Montreal, which, in the past, has been the strongest supporter of the Association, made even a worse showing at the London meeting last year.

Some of the visitors from other countries added much to the interest of the meeting by reading papers and taking part in various discussions. Among these were Mr. Mayo Robson and Dr. Jap Sinclair of England, Dr. Dudley of Chicago, Dr. Mayo of Minnesota, and Dr. McKenzie of Portland, Oregon. The courtesies extended to all by the local profession were beyond description in the small space at our disposal, and were very highly appreciated:

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### CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

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The recent report of this Association is in some respects discouraging. Although it has been in existence for three years, the total membership is now only 288, including the following numbers in the different provinces: Ontario, 217; Quebec, 29; Nova Scotia, 8; New Brunswick, 10; Manitoba, 4; North-West Territories, 5; British Columbia, 15. The President, Dr. Powell, thinks, however, we may continue on our present lines for another year at least.

According to the solicitor's report, the Association during the last year has taken charge of six cases of alleged malpractice. The Committee have been careful in all cases to make inquiries as to the merits of the case, and have undertaken no defence where the defendant's actions were blameworthy. Thus far they have only declined to defend in one case, in which they advised the member to settle, because from his own statements he was in fault.

The Association has always insisted on having the proceedings conducted so far as possible through its own solicitors, who have been given the free hand in appointing agents and counsel to represent them in the cases which have been defended. No trouble has so far arisen excepting in one case in which the member had himself made arrangements for his defence before communicating with the officers of the Association. In this case an arrangement was made by which the Association agreed to contribute towards the expenses of the defence.

If a sufficient number of members join the Association from the different provinces, it will probably be found expedient to

have a local committee appointed for each province where the number of members will warrant the extra expense, with representatives from different districts and a solicitor or counsel to advise in regard to actions arising in such province. Up to the present all the actions except two have arisen in the Province of Ontario.

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### WATER FILTERS.

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It has been generally recognized for many years that the average water filter is absolutely worthless. It is perhaps not so generally understood that it is frequently also dangerous. One element of danger is, of course, that it cannot under the best of circumstances purify water for any length of time. The *Chicago Health Bulletin* speaks as follows: "The common tap filters are not only worthless but are actually harmful because they do not stop any of the bacteria—only the organic matter, such as vegetables and animal detritus. Now, when the water is shut off, a few bacteria remaining upon this animal matter find it to be a suitable food, and as a result they increase enormously in numbers, so that the next water drawn through the tap filter washes them out; and the longer such a filter is used the more bacteria are found in the water which it filters. Stone or porcelain filters are of value, but only if properly cleaned. During the first few hours such a filter is used, the bacteria being so small pass through the pores of the filter. These pores finally become clogged with bacteria. Then after a number of hours, depending upon the pressure, the water will be free from bacteria, but after a day or so the bacteria grow through the filter and the water is again contaminated. Therefore, the first water coming from such a filter should be rejected and the filter itself should be boiled and thoroughly cleansed every two or three days."

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### AUTOMOBILES FOR MEDICAL MEN.

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We are told that the trolley car and the horse will soon be driven from the crowded streets of our cities by the automobile. During the last twelve months the automobile output in the

United States exceeded in value all the locomotives built in America by \$20,000,000, and the industry is considered now to be scarcely out of its infancy.

Many physicians both in the old and the new world have taken to the automobile. The Automobile Club of Great Britain and Ireland has devoted much time, energy and money during the last few years in carrying out prolonged trials of automobiles. We are told by the *British Medical Journal*, that one of the principal objects of the club is to popularize the use of automobile transport by making extensive trials of the productions of those manufacturers who are willing to submit to their tests. The last trials, which have been recently concluded, were very interesting to medical men, and were confined to cars of low price, the limit being fixed at £200, and the trial of each car lasted six days. In spite of the narrow limit, a large number of different makes were entered. The *Journal* promises to issue at an early date a complete report of the results. In the meantime, however, it states that a number of automobiles performed well, and the medical practitioner may now feel assured that he can purchase a car which is likely to give good satisfaction at a cost not to exceed \$1,000.

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### CHRONIC CONSTIPATION.

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The views of the medical profession on this important and common disease have been very divergent. Some have held it responsible for the gravest symptoms, while others have considered that auto-intoxication from this cause is rare. Nearly all agree, however, that the source of the trouble lies in the innervation of the intestine, leading either to a lessening of the normal peristalsis or to a spasm of the muscular coat. About two years ago Strassburger advanced the theory that chronic constipation was due to a lack of proper stimulus in the intestine, furnished in normal conditions by bacteria and their products. He was able to demonstrate that the feces from patients of this description were abnormally poor in bacteria—in fact, that they contained forty times less than were found in normal feces. This was largely due to the absence of the remnants of digested



food, such as muscle fibres, cellulose, etc., the usual nutrient medium of the intestinal flora. The food was too completely utilized to allow the necessary bacterial growth; the stools are consequently nearly odorless, and cannot support enough bacteria to generate the gases necessary for normal peristalsis. The rational cure, then, of this trouble would be, according to the opinions of some therapeutists, a diet of indigestible substances which would provide nutrient media for the intestinal bacteria. While we admit that a diet too restricted in character is apt to produce constipation, we know that a recommendation to use indigestible foods promiscuously is absurd. No definite rules can be given which will suit all men, but clinical observation shows that a carefully selected mixed diet suited to the idiosyncrasies of each patient is the best. Careful study is always required to discover what foods are the best for each patient under observation.

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#### **Cause of Cachexia accompanying Neoplasms.**

Quite often a small, non-ulcerating, malignant tumor produces such a marked cachexia that we are at a loss to account for it. It was assumed that the tumor cells secreted a poisonous substance which was absorbed by the system, but no one attempted to isolate this toxin. Early this year, however, Kullmann has found that the cells of cancer contain a substance which rapidly dissolves blood corpuscles. This toxin he isolated and injected into the bodies of animals, producing a prompt and active dissolution of the blood corpuscles. A similar substance has also been isolated from the cells of sarcoma.

## Personals.

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Dr. Price Brown, of Toronto, returned from England, September 1st.

Dr. Simon J. Tunstall, of Vancouver, visited Toronto, September 28th.

Dr. Thomas McCrae, of Baltimore, Md., visited Toronto, September 13th.

Professor Lang paid two visits to England during the summer holidays.

Dr. J. Watson, Unionville, has moved to Toronto and will reside at 829 College Street.

Dr. W. W. Jones, of Mount Forest, Ont., has become a Fellow of the Royal College of Surgeons of England.

Dr. Brefney O'Reilly, of Toronto, sailed from Vancouver, September 19th, on the SS. *Tartar* as its medical officer.

Dr. Goldwin Howland, after a post-graduate course of two years in England and on the Continent, has returned to Toronto.

Professor J. J. McKenzie spent the greater part of the summer in Great Britain, and returned to Toronto, September 15th.

Dr. J. Archer Brown, of Colborns, Ont., and Dr. F. N. Hughes, Fennell's, Ont., have gone to London, England, for post-graduate work.

Dr. H. E. Anderson, of Toronto, after spending a portion of the summer on Georgian Bay, returned to his home, September 1st.

Dr. F. N. G. Starr, of Toronto, was married to Miss Mackay, daughter of G. Forest Mackay, at New Glasgow, N.S., September 14th.

Professor Ramsay Wright, who spent the greater portion of the summer in Prince Edward Island, returned to Toronto, September 25th.

Dr. James Lyons Biggar, of Tillsonburg, Ont., was married to Miss McMurrich, daughter of Mr. W. B. McMurrich, at Toronto, September 22nd.

Dr. R. W. Bruce Smith, Assistant Superintendent of the Asylum for Insane, Brockville, has been appointed Inspector of Prisons and Asylums in the place of Dr. J. F. Chamberlain, resigned.

Dr. Franklin Dawson, of Toronto, returned to his home, September 11th, after a tour of four months in England, Scotland and France.

Dr. Jas. F. W. Ross, of Toronto, attended the meeting of the American Association of Obstetricians and Gynecologists held in St. Louis, September 15th to 18th.

Dr. Arthur W. Maybury, of 253 Spadina Avenue, Toronto, has returned to the city, and resumed his special work in diseases of the nose, throat and chest, September 19th.

Prof. Jap. Sinclair, of Manchester, England, after attending the meeting of the Canadian Medical Association in Vancouver, spent a few days in Toronto, the guest of Dr. J. F. W. Ross.

Professor I. H. Cameron who attended the meeting of the British Medical Association at Oxford and also paid a short visit to the Continent, returned to Toronto, September 20th.

Dr. Chas. O'Reilly, of Toronto, attended a meeting of the National Association of Hospital Superintendents at Atlantic City, September 20th, to 23rd, and was re-elected first vice-president.

Dr. Herbert A. Bruce made a fairly rapid recovery after the appendicectomy, performed August 31st. He left Toronto, October 1st, for Atlantic City, where he expected to remain a fortnight.

The following Canadians have been admitted members of the College of Surgeons, England: F. G. Neal, M.B. (Tor.); G. H. McLaren, M.B. (Tor.); W. E. Robertson, M.B. (Tor.); W. T. Wallace, M.B. (Tor.).

Dr. A. Orr Hastings returned from England to New York on the new SS. *Baltic* of the White Star Line, which on this occasion carried more passengers than have ever before crossed the ocean at any one time.

Dr. John McCrae, of Montreal, has been appointed Professor of Pathology in the University of Vermont. This appointment will not interfere with his residence and professional and collegiate work in Montreal.

Dr. C. R. Dickson, of Toronto, attended the American Electro-Therapeutic Association in St. Louis, September 20th to 23rd. He also attended the International Electrical Congress as a delegate of the American Association.

Dr. C. K. Clarke, Medical Superintendent of the Rockwood Hospital, Kingston, Ont., has been appointed co-editor of the *American Journal of Insanity*. His editorial duties will not interfere with his work in the Rockwood Hospital.

Dr. Wallace Scott is another of our Canadian graduates who has recently become a Fellow of the Royal College of Surgeons of England. After a two-years' post-graduate course in London, he visited Toronto, and was the guest of his father, Principal Scott, of the Normal School.

Lord Strathcona has recently given \$50,000 to the Medical Faculty of McGill University for general endowment purposes. It is also announced that Lord Strathcona and Sir Wm. Macdonald have given \$25,000 each, towards the fund for the establishment of a University gymnasium.

Dr. J. A. Roberts, of Toronto, has recently become a Fellow of the Royal College of Surgeons, of England. During his recent visit to Toronto he was the guest of Dr. J. T. Clark. He is at present visiting some of the large hospitals of the United States, and will probably commence practice in Toronto shortly.

Mr. Cawthra Mulock, son of Sir William Mulock, has presented to the trustees of the Toronto General Hospital the sum of one hundred thousand dollars for the building, equipping and furnishing of an out-door department for the treatment of the sick poor, and at the same time to furnish further facilities for clinical teaching for the Medical Faculty of the University of Toronto.

Sir Lauder Brunton, of London, England, recently visited certain cities of Canada. He came from Ottawa to Toronto, and spent a couple of days in the latter city, being the guest of Dr. McPhedran. Never since Lister visited Toronto in 1897 have the physicians of the latter city been so thoroughly charmed with any medical representative of the Mother Country as they were with Sir Lauder.

Oct. 1904

## Obituary.

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### DR. ROBERT SAMUEL CHEFFEY.

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Dr. Robert Samuel Cheffey, formerly of Alliston and Beeton, died in the General Hospital, Toronto, Sept. 12th, aged 78. Dr. Cheffey was for over half a century a prominent figure in the County of Simcoe, as a physician, a coroner and a public-spirited citizen. He retired from active practice and removed to Toronto about four years ago.

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### DR. WM. STEWART FRALEIGH.

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Dr. Wm. Stewart Fraleigh, of Toronto, died August 20th. He graduated from McGill University in 1869. He had practised in Toronto for many years, and also took considerable interest in public affairs, being for a time one of the city aldermen.

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### DR. JOHN CASCADEN.

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Dr. John Cascaden died at his home in Dutton, August 31st. He graduated from the University of Toronto in 1863. After some hospital service in the American civil war and a post-graduate course in Great Britain, he practised for a number of years in Western Ontario. In 1890 he was appointed Medical Superintendent of the Mimico Asylum, but resigned in a few months, and resumed the practice of medicine in Dutton. In politics he was a strong Liberal, and was elected to the Legislature at the general elections of 1879 and 1883. He retired from active politics at the end of his second term.

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### MR. JOSEPH HALL.

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Mr. Joseph Hall, a medical student at the Western University, London, Ont., was drowned at Bear Creek, in the township of Enniskillen, August 21st.

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